

Table of Contents

- I. Executive Summary
 - II. General Information
 - A. The Purpose of the Report
 - B. The Assessment Team
 - C. Report Format
 - D. The Site Investigation
 - III. Clinic Inspection Summary
 - A. Community Information
 - B. General Clinic Information
 - C. Program Deficiency Narrative
 - D. Architectural/Structural Condition
 - E. Mechanical Condition
 - F. Electrical Condition
 - G. Civil / Utility Condition
 - H. Existing Facility Floor Plan (Site plans, New Clinic Plans, Regional Map)
 - IV. Deficiency Evaluation and Cost Assessment
 - A. Deficiency Codes
 - B. Photographs
 - C. Cost Estimate General Provisions
 - V. Summary of Existing Clinic Deficiencies
 - VI. New Clinic Analysis
 - VII. Conclusions and Recommendations
- Appendix A: Specific Deficiencies Listings
- Appendix B: General Site Photographs

I. Executive Summary

Overview:

The Elim Clinic is approximately 737 net square feet of space leased from the City of Elim owned building that houses the City and Corporation Offices, offices for the Public Library, the Public Safety Office and Lock-up, the Environmental Safety Office, and offices for the Village Based Counseling program. There are two overnight rooms that have limited use by the clinic facilities. There are also public toilet facilities that are used by all occupants of the building.

The total building is 60' x 60' and has a full basement that is used for itinerant clinic space which mandates adequate access. It is one of the smaller clinics in the NSHC program area, and it is very inefficient and overcrowded since it shares so many required spaces with other tenants in the building. The clinic has a very small waiting room, one non-compliant exam/trauma room at the end of an internal corridor and then clinic corridor. There is a second exam room, no clinic designated toilet, two small offices, one storage in the clinic space. There is a janitor closet for the building, a medical storage room down the hall, and the non-ADA compliant public restrooms with baths down the hall adjacent to the overnight rooms that are also shared. There is a front entry with vestibule, stair, and ramp, and rear entry with vestibule and stair. The simple wood frame construction on a concrete basement wall system directly on the gravel site is well constructed. The clinic is in relatively poor condition and is very small to deliver health services program to a community this size, 313 residents. It should be recognized that the community has grown over 18% in the last 10 years.

Renovation/Upgrade and Addition:

The existing Clinic will require a 1265 SF addition to accommodate the current need and Alaska Rural Primary Care Facility space guidelines. This addition would require some reconfiguration of the site and additional new fill and pad work. There would also need to be major renovation and upgrade of the existing clinic. As can be seen from the documentation enclosed, the existing clinic will require major renovation to meet current code and standards as well. The cost of renovation and addition will far exceed the cost of a new clinic facility.

New Clinic:

The city has provided a new site, adjacent to the existing church, on the road to the airport, and central to the community and other city facilities. It is available immediately for a new clinic. The community has proposed that a new larger 2000 SF Denali Commission Medium Clinic can be constructed on the new site. We have included preliminary site plan for this site and a new 2000 SF clinic.

The proposed site has access to full utilities with the city's new water and sewer system just becoming available. The new proposed site is in easy access to the entire community and other community related facilities

The community has completely supported this effort and have met extensively to assist in new site issues and to resolve any site considerations of the site presented.

II. General Information

A. The Purpose of the Report and Assessment Process:

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility assessment, planning, design and construction. Over 200 clinics will be inspected through the course of the program. The purpose of the Code and Condition survey report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need between the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 1 and 2. The information gathered will be tabulated and analyzed according to a set of fixed criteria that should yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most efficient means to bring the clinics up to a uniform standard of program and construction quality.

A team of professional Architects and Engineers traveled to the site and completed a detailed Field Report that was reviewed by all parties. Subsequently, the team completed a draft and then final report of the facility condition.

B. Assessment Team:

The survey was conducted on August 2, 2001 by Gerald L. (Jerry) Winchester, Architect, Winchester Alaska, Inc.; Eric Cowling, EIC Engineers, Chet Crafts, ANTHC. Accompanying the field inspection team was Mark Anderson, ANTHC and Darryl Alleman, P.E., Northwest Regional Manager from ANTHC, Helen Pootoogooluk from Norton Sound Health Corporation and Carol Piscoya, from Alaska Division of Community and Business Development, ADCED. Mark, Ellen, and Carol were very familiar with the village and knew the village contacts personally. They made introductions and conducted village briefings to ensure complete understanding to the inspection process. Team members who assisted in preparation of report from information gathered included members of the field team above and Ben Oien PE, Structural Engineer; Bob Jernstrom, PE, Mechanical Engineer; Carl Bassler PE, Civil Engineer; and Jay Lavoie of Estimation Inc.

C. Report Format:

The format adopted is a modified "Deep Look" format, a facilities investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to the requirements of the governing building codes and design guidelines. Building code compliance, general facility condition, and program needs have been evaluated. The written report includes a floor plan of the clinic, site plan as available, and new plans for renovation/upgrade or completely new clinics. Additional information was gathered during the field visit which includes a detailed Field Report and building condition checklist, sketches of building construction details, investigations of potential sites for new or replacement clinics, and proposed plans for village utility upgrades. This information is available for viewing at ANTHC's Anchorage offices and will be held for reference.

D. The Site Investigation:

On August 2, 2001, the team flew to the site and made observations, took photos, and discussed the needs with on-site personnel for the facility. Approximately three and half hours was spent on site, with sufficient time to investigate foundations, structure, condition, mechanical and electrical systems, and to interview the staff to assess current and projected health care needs.

Interviews were conducted with the Lillian Amaktolik and Jeanne Jemenouk, Health Aides, and other city officials and residents. The city and tribal staff provided information on the existing building, site, and utilities. Additional review was made of existing data from NSHC from physician's assistants, community health aides, travel clerks, dentists, specialty clinic providers, and medivac teams. These interviews and background data have provided clear understanding of the needs of the village, the clinic facility, and the users of the facility.

The Elim community has reviewed the use of a Denali Commission Medium Health Clinic Space Guidelines and a preliminary design has been adapted to the Elim Site. The site is secured adjacent to the church on the way to the airport. We have attached preliminary site plans and photos for reference.

II. Clinic Inspection Summary

A. Community Information:

Population: 313 (2000 Census)

2nd class City, Unorganized Borough, Bering Straits School District, Not Applicable

Location:

Elim is located on the northwest shore of Norton Bay on the Seward Peninsula, 96 miles east of Nome. It lies 460 miles northwest of Anchorage. It lies at approximately 64d 37m N Latitude, 162d 15m W Longitude (Sec. 15, T010S, R018W, Kateel River Meridian). The community is located in the Cape Nome Recording District. The area encompasses 2 sq. miles of land and 0 sq. miles of water.

History:

This settlement was formerly the Malemiut Inupiat Eskimo village of Nuviakchak. The Native culture was well developed and well adapted to the environment. Each tribe possessed a well-defined subsistence harvest territory. The area became a federal reindeer reserve in 1911. In 1914, Rev. L.E. Ost founded a Covenant mission and school, called Elim Mission Roadhouse. The City was incorporated in 1970. When the Alaska Native Claims Settlement Act (ANCSA) was passed in 1971, Elim decided not to participate, and instead opted for title to the 298,000 acres of land in the former Elim Reserve. The Iditarod Sled Dog Race passes through Elim each year.

Culture:

It is an Inupiat Eskimo village with a fishing and subsistence lifestyle. The sale or importation of alcohol is banned in the village.

Economy:

The Elim economy is based on subsistence harvests; cash employment is limited to fishing, the city and school. Unemployment is high, and seasonal part-time employment in nearby Nome has declined recently due to a depressed gold market. 39 residents hold commercial fishing permits.

The Village wants to develop a fish processing plant. Residents rely on fish, seal, walrus, beluga whale, reindeer, moose and garden harvests.

Facilities:

Water is derived from a well and is treated. BIA and HUD housing, and water and sewer systems built by PHS in 1974, have provided residents with piped water and sewer, indoor water heaters and plumbing, and in-home washers and dryers. Wastes flow to a sewage treatment plant with ocean outfall. The landfill is not permitted. The City needs a new water source, since water shortages occur, and to replace cracked PVC pipes.

Transportation:

Elim is best reached by air and sea. Recent improvements have made the State-owned airport one of the best and most modern in the region. It offers a 3,000' gravel runway. Elim Native Corp. also owns a private 4,700' paved airstrip with a 1,390' crosswind runway at Moses Point. There is no dock in the village, so supplies must be lightered to shore by a company operating from Nome. Plans are underway to develop a harbor and dock; an access road is under construction. A cargo ship brings freight annually to Nome.

Climate:

Elim has a subarctic climate with maritime influences. Norton Sound is ice-free generally between mid-June and mid-November. Summers are cool and moist; winters are cold and dry. Summer temperatures average between 46 to 62; winter temperatures average -8 to 8. Annual precipitation is 19 inches, including about 80 inches of snow.

B. General Clinic Information:

Physical Plant Information:

The existing Elim Clinic occupies 808 SF in a leased portion of the City office building. (See attached Plan) At various times there have been remodels and renovations to accommodate the changing medical delivery and to meet the communities needs. Such items include moving the medical storage out of the clinic proper due to not adequate space in the clinic itself

The simple wood frame construction on a concrete basement foundation system is unique in rural Alaska and is because of the good gravel site. The water is provided from city system, and sewer is to a city lagoon. (See site drawings)

The clinic has a very small waiting area for the size of the clinic with one chair. It is the main way into the clinic and is full of storage items. There is an exam/trauma room that is not of compliant size and one other exam room connected to the waiting with two separate hallways with storage between. This is very inefficient use of circulation space. There are two small offices; one is used for reception and the other by health aids and records storage. They are both very small. There is medical supply storage down the hall with use of the two public toilet/bathrooms available by going down the public hallway. The boiler room is accessible through the basement area and is for the complete facility. There are two sleeping room with one bed each for use by all tenants of the building. Therefore, the medical staff has only limited use and often stays in the exam rooms using the rollaway bed. There is a janitor/storage room accessible from the main hallway that is used by the entire building.

The front stairs, landing, ramps are not code compliant and has a vestibule. The secondary rear exit from the hallway has a vestibule and the stairs do not meet code. The offices are small and storage is very minimal. There are sinks in both exam rooms and none of the sinks or fixtures are ADA compliant. The baths in public toilet/bathrooms do not meet code either. The doors on the rooms are not privacy doors and do not have ADA compliant hardware.

Clinic program usage information:

Patient records indicate the clinic sees an average of 163 patients per month in 2000, and 127 patients per month in 1999. This is a 28.5% increase in patient encounters in the last two years. There are 2 full-time staff, 1 relief, and 1 on leave and 1 Itinerant or contract staff equivalent. The office space provided is not adequate and all the office functions, travel, files, and use by all health aides is accomplished in the single office area. There are only two exam rooms to see patients. When itinerant providers are in the facility it is very crowded. The remainder of the facility is packed full of medical items, office, and small circulation. Storage is completely inadequate; basically only one patient can be seen at a time.

C. Program Deficiency Narrative:

1. Space Requirements and Deficiencies:

Space Comparison Matrix - Current Elim Actual SF to Denali Commission Medium Clinic

Alaska Rural Primary Care Facility

Purpose / Activity	Current Clinic						Medium clinic					
	Designated Itinerant			Actual Net SF			ARPCF SF			Difference		
	Size	No.	Net Area (SF)		No.	Net Area (SF)	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)
Arctic Entries							0	50	2	100		100
Waiting/Recep/Closet	150	1	150	123	1	123	150	1	150			27
Trauma/Telemed/Exam	200	1	200			0	200	1	200			200
Office/Exam				113, 161	2	274	150	1	150			-124
Admin./Records				69, 57	2	126	110	1	110			-16
Pharmacy/Lab						0	80	1	80			80
Portable X-ray						0			0			0
Specialty Clinic/Health Ed/Conf						0	150	1	150			150
Patient Holding/ Sleeping Room						0	80	1	80			80
Storage	150	1	150	17,97	2	114	100	1	100			-14
HC Toilet						0	60	2	120			120
Janitor's Closet						0	30	1	30			30
Subtotal Net Area			500			637			1270			633
Circulation & Net/Gross Conv. @ 45%						171			572			401
Subtotal (GSF)						808			1842			1034
Mechanical Space @ 8%						0			147			147
Total Heated Space			500			808			1989			1181
			0									
Morgue (unheated enclosed space)							30	1	30			30
Ext. Ramps, Stairs, Loading			HC Accessible			As Required			As Required			As Required

- Overall space deficiencies: The size of the facility is about 1200 SF short of the ARPCF space requirements.
- Specific room deficiencies: There are small vestibules, minimal waiting room and exam room space, inadequate office space, and minimal storage. These deficiencies in combination with other small spaces leave the clinic program deficient.
- Other size issues: The mechanical room is very tight and needs upgrading to be adequate. There is no unheated exterior storage shed in the front.

2. Building Issues:

- Arctic Entries - The main entry is not accessible for ADA and it is not possible to get a gurney into the room. It has not compliant ramp and door width to provide accessibility. The rear entry has a non-compliant stair and railings. The stairs, ramps, landings and vestibules all require complete replacement.

- b. Waiting / Reception –The waiting area contains one chair and is used as the main circulation hall. It is very small for the size of facility and needs to be over four times the space. Several rooms' access from this room and hall making it difficult to have a waiting area that is not in the middle of all circulation of staff. Many other items are stored in the space. Patient use is restricted.
- c. Exam / Trauma – There is one exam/trauma room available. The room is sized inadequately, is at the end of a secondary hall and is difficult to get patients into. Additionally there is not door width for gurney access. The room is full of other clinic equipment and storage items. Privacy is an issue with hollow core doors.
- d. Exam room – There is one smaller exam room with inadequate space for normal operation. Like the trauma room the exam room has considerable additional storage of items due to the lack of storage in the facility. Additionally the sinks are not to code and sanitary conditions. One has a plywood cabinet, and no ADA access. Sanitary concerns are also major in the floor, wall and ceiling materials in these rooms.
- e. Office / Administration / Records – There are two rooms each with one desk. The front office has all radio equipment, copier, fax, and other items to the point that only one person can work in the room. The second office a desk, a single patient chair, and all the patient records and considerable storage. The door to the waiting room cannot close due to stored items that do not provide adequate privacy for patient interviews and phone calls. This room is not large enough for an office and when a patient is also in the room it is very tight. The electrical service is totally inadequate for this room and the facility.
- f. Pharmacy / Lab – There is no actual Pharmacy and items are stored in cabinets in the exam rooms.
- g. Specialty Clinic / Health Education / Conference - This function is completed in the exam rooms and makes any other medical delivery difficult but manageable. The problem is not having specific place for the specialty staff to work, so with a patient in the room, there is no place for them to consult easily.
- h. Patient Holding / Sleeping Room – There is no dedicated space for itinerant staff. They currently use the exam room with a rollaway bed.
- i. Storage – Storage is totally inadequate or safe. There is not adequate shelving and cabinet for proper medical storage. It is spread into the hallways, exam rooms and throughout the facility. It is very dysfunctional due to location, lack of shelving and storage systems.
- j. HC Toilet Facilities – There are no toilets dedicated for the clinic patients or staff. The only toilet facilities are the public toilet/bathrooms located outside the clinic and down the hallway. The toilets do not meet ADA requirements and are not adequate for this facility and the needs of the community. The room does not meet any of the ADA or UPC requirements. The toilet and sink lacked sufficient clearances and were of incorrect fixture type. There is no vacuum breaker on this sink as required by code. There is no ADA tub. All these areas are very unsanitary due to deteriorating floor system and wall joints.

- k. Janitors Room – There is a room that has a janitor's sink in the hallway for the entire building use. This room is combining functions that are normally not compatible and sanitary. It is very crowded.
- l. Mechanical/Boiler room – The Mechanical room is actually a boiler room and is accessible from the basement large gathering space. This situation does not meet code. There is no full 1 hr. separation due to hole in walls.
- m. Ancillary Rooms – There are no ancillary rooms as all space is used to maximum capacity including storage rooms, exam rooms, toilet rooms, office, waiting room, corridors, and vestibules.

3. Functional Design Issues

This facility is functionally inadequate for its current programmed and intended use. The spaces do not meet the functional size requirement, sanitation and patient care are very poor due to material failures, and there is need for more space to meet delivery needs. The size of the community would dictate a much larger facility than even a Medium Clinic. The ability to perform required medical functions within the facility is severely hampered by lack of storage, and not adequate sinks.

4. Health Program Issues

a. Patient comfort and privacy:

The front door of the clinic is though a public hallway that is inadequate for access and permits very little patient privacy in the waiting areas for other building operations. The waiting room is totally inadequate for size with only one chair. There is minimal patient privacy since some of the doors are hollow core, do not all close properly, and sight lines are not screened.

b. Medical/Infectious Waste

This is being handled in a very basic method and is hampered by the small non-functional facility.

c. Infection Control

This is being completed with minimal long-term control due to lack of facilities. Floor materials are very worn out and replaced with multiple materials and sizes allowing for control problems. There is no rubber base material, and walls and ceiling materials are cracked in numerous places due to building shifting. This makes cleaning difficult. There is a janitor sink for general cleaning in the hallway and sinks in the exam rooms for practitioner use though none of these meet code requirements.

d. Insect and Rodent Control

None noted or investigated

e. Housekeeping

The difficulty in cleaning and housekeeping in such a congested facility is understandable and is being done at the best level currently possible.

5. Utilities

a. Water Supply

The piped system for the clinic is from the City system and seems adequate.

- b. Sewage Disposal
Sewer system is provided by gravity piped system to city lagoon.
- c. Electricity
See Electrical Narrative
- d. Telephone
A single phone line services the clinic and is inadequate for current needs.
- e. Fuel Oil
The fuel system is not adequate with some leaking having occurred around the existing above ground tank. There is not protection or containment for possible spilling.

D. Architectural / Structural Condition

1. Building Construction:

- a. Floor Construction:
The floor is 2 x 12 joist over a 6 ¾" x 19" Glu-lam floor beams. The beams are supported with 6 ¾" x 16" posts on a concrete foundation. The building has a full concrete exterior wall basement underneath. There is R-11 insulation in the floor with 5/8" gypsum wallboard on the bottom of the joist. There is normal amount of building shifting with some settlement and heaving that has caused doors to stick and floor to be uneven.
- b. Exterior Wall Construction:
The walls are 2 x 6 construction at 16" oc. The sheathing is T-111 siding painted and R-19 fiberglass batt insulation with vapor barrier gypsum board on the interior.
- c. Roof Construction:
The roof is a full-span truss at 24" oc with plywood deck and metal roof. The insulation is approximately 12" or R-38 of batt insulation that is minimal in this climate. There is minimal attic ventilation with only drilled eave vents and no gable vents.
- d. Exterior Doors:
The exterior doors are hollow metal in OK shape with some corrosion and deterioration. They need complete replacement.
- e. Exterior Windows:
Windows are of thermo-pane wood casement windows and do not all open. Several do not meet any type of exiting code and are only 20" x 30" horizontal shape and should be replaced.
- f. Exterior Decks, Stairs, and Ramps
The main Arctic entry is inadequate and the secondary exit and vestibule are also very minimal. The landing, stairs, railings, and ramp do meet current codes. The stairs and ramps need pads at the base and adjustment for sloping and settlement.

2. Interior Construction:

a. Flooring:

The flooring is Vinyl tile over plywood. It has been replaced in many areas and is seriously deteriorated in most areas. Entire replacement of underlayment and finish is required to meet sanitary requirements.

b. Walls:

The walls are of 2x4 wood construction with gypsum board finish and with no sound insulation. The type of wall construction does not provide for minimal patient privacy, and replacement with sound walls is recommended to meet current standards. There are many cracks in wall system due to shifting building.

c. Ceilings:

The ceilings are spray acoustic over gypsum wallboard and needing repair. The ceiling is not easily washed and presents a serious sanitation issue.

d. Interior doors:

The interior doors are mixed solid and hollow core wood and provide no sound isolation and need adjustment due to floor shifting to close properly. They are not ADA accessible and the hardware does not meet ADA requirement.

e. Casework:

The upper casework is minimal and the lower casework is of very poor construction. Tops are of plastic laminate and do not fit to walls and are seriously deteriorating. The sanitary issues are significant with the counters being of such construction. Need full replacement.

f. Furnishings:

The furnishings are old and worn. There is one chair in the waiting room and a variety of mismatched and old desks, chairs, and tables for other use. The exam tables are older as well.

g. Insulation:

Floor Insulation	R-19
Wall Insulation	R-19
Attic/Roof Insulation	R-38
Attic Ventilation	Eave Vents only

h. Tightness of Construction:

The facility is of generally minimal overall construction and due to building shifting there are numerous leaks in construction system at doors, floor, roof, and sills.

i. Arctic Design:

The vestibules are unacceptable and need replacement. The orientation is OK, and siting of the clinic is adequate. The site is adequate for normal arctic design.

3. Structural

a. Foundations

The foundation is concrete basement foundation walls and footings with wood posts and beams to form the floor system. The system seems adequate and only required upgrading for floor finishes above.

- b. Walls and Roof:
The walls and metal roof seem in relatively stable and adequate condition.
- c. Stairs, Landings, and Ramps
These elements are in poor condition and need replacement.

E. Mechanical Condition

1. Heating System

a. Fuel Storage and Distribution

The clinic's heating fuel oil storage tank is located adjacent to the building and not a minimum of 5 ft. as required by code. The 1000-gallon storage tank is too large does not have the proper venting, piping, or valving as required by code.

b. Boiler

A single commercial grade, oil-fired boiler provides heating for the entire clinic. The boiler is in fair shape but missing controls and systems to meet the needs of the Health Clinic. There is significant corrosion on the boiler stack due to missing storm collar flashing at the chimney roof penetration. There is one undersized combustion air opening for the boiler. There are no additional heaters in the clinic to assist with heating.

c. Heat Distribution System

The piping has been routed within the basement area exposed to avoid freezing. The baseboard enclosures range from fair to poor in condition and needs replacement in some areas

2. Ventilation System

a. System

There is no mechanical ventilation system. Ventilation is by operable windows. The windows do not open easily and as such do not provide effective ventilation. Interior areas have no ventilation.

b. Exhaust Air

Ceiling mounted exhaust fans service the toilet rooms. These fans are not ducted outside, but are ducted into the attic space. One of the fans is loosely mounted to the ceiling. Both fans need replacement.

3. Plumbing System

a. Water System

The water system plumbing is typical ½" and ¾" copper distribution piping to the clinic exam sinks and toilet fixtures.

b. Sewer System

City sanitary sewer provides the needs of the clinic.

- c. Fixtures
The toilet room plumbing fixtures are not ADA approved or UPC code compliant for barrier free access. There is no janitor's sink for the clinic area.
- d. Water Heater
The water heater has not been provided with code required dielectric unions on the hot and cold-water connections.

F. Electrical Condition

1. Electrical Service

- a. The AVEC electrical service is provided by an overhead service connection to the building. The service is provided by a meter base and does not have a main disconnect switch as required for the service configuration and allows unprotected service entrance conductors to be routed into the building.
- b. The meter base is Nema 3R.
- c. No meter information was available on the exterior of the meter base and the meter was sealed. The meter appeared to be a 100 Amp. The service entrance feeder routed into the building was a 1" conduit that at maximum could accommodate 100 Amp conductors. The unprotected service entrance conductors splice somewhere in the building and route to dual 200 Amp, 120/240V, 1 Ph, 3 wire panelboards. Each panelboard has a 200 Amp main disconnect switch.

2. Power Distribution

- a. The upstairs panelboard is a 200 Amp Cutler Hammer panelboard with 30 poles total of which 4 are spare. The panel serves as the branch circuit panelboard for the clinic and other circuits on the main floor. The main feeder wiring terminated into the main circuit breaker is #4 CU with #2 Aluminum cable jumper installed as a spacer.
- b. The basement panelboard is a 200 Amp Cutler Hammer panelboard with 30 poles total of which 17 are spare. The panel serves as the branch circuit panelboard for the boiler room and other unknown locations. The main feeder wiring terminated into the main circuit breaker is #2 Al.
- c. A neutral to ground bond is installed in the both panels which violates NEC 250.
- d. The majority of the branch circuit wiring is installed in EMT raceways with a ground conductor.

3. Grounding System

- a. A building grounding electrode could not be found. Not grounding electrode conductor appeared to be installed at the meter base nor either panelboard. No bonding to the metallic piping system was found as well.

4. Exterior Elements

- a. HID exterior light fixtures are installed at the exterior doors that appear to be controlled via wall switch. The diffusers are yellowed.
- b. Exterior power receptacles were installed but the covers were damaged and the receptacles were not functional.
- c. Telephone service enters at a weatherproof protection test block on the exterior of the building.

5. Electrical devices and lighting

- a. Receptacles are grounding type.
- b. The lighting is predominately 4 ft fluorescent T12 (4) lamp T-bar grid type fixtures mounted surface to the ceiling.
- c. Interior device plates are non-metallic ivory decorative plates.

6. Emergency System

- a. Illuminated emergency egress signs are installed but were not functional and did not provide complete coverage of the space.
- b. Emergency egress illumination was installed but was not functional and did not cover the entire facility. Several of the units appeared to be connected to the local receptacle circuits in lieu of the lighting circuits.

7. Fire Alarm System

- a. Battery powered smoke detectors were installed to provide partial coverage. Many of the detectors were not functional. A manual system was installed but no visual indication is present. The control panel is a Gamewell ZANS 400 with Ademco autodialer. The control panel and dialer are not functional.

8. Telecommunication

- a. The telephone system has exposed cabling routed throughout the facility.
- b. A wall mounted data rack is installed in the front clinic office and a wireless LAN hub is installed.
- c. The radios and associated equipment are setting on a desk with antenna cabling routed through the walls.

G. Civil / Utility Condition

1. Location of building

- a. Patient Access

Located in the relative center of the village for ease of access and seems to work fine. It is just a few blocks from the main road to the airport that is an advantage.

b. Service Access

Road access is provided to front and rear entry. Stair and ramp access are not adequate.

c. Other Considerations:

The facility is located on a relatively flat site in a sloping site of the village and is a good location with gravel soils.

2. Site Issues

a. Drainage

Drainage from the site is adequate.

b. Snow

There does not appear to be a snow-drifting problem as the facility sits in the open.

3. Proximity of adjacent buildings

There is a new school facility to the south and the existing school to the east. There is not adequate site for expansion.

4. Utilities

a. Water Supply

The city piped water system is very adequate and serves well.

b. Sewage Disposal

The city piped sewer system to the lagoon is adequate.

c. Electricity

Power from Village system via overhead wire. See Photos

d. Telephone

Overhead phone with only one phone connection, requiring fax and phone on same line.

H. Existing Facility Floor Plan (Site Plan if available):

We have attached drawings, as we have been able to identify, find, or create as part of this report. We have endeavored to provide all drawings for all the sites; however, in some cases exact existing site plans were not available. We have provided as indicated below:

A1.1 Existing Vicinity and Site Plan is attached if available

- A1.2 Existing Facility Floor Plan is attached following.
- A1.3 The Existing typical wall section is attached following as required by the report guidelines.
- A2.1 The Addition to the Existing Facility as required to meet ARPCF Space Guidelines is attached following.
- A3.1 The New Clinic Site plan is attached as proposed based on the community input.
- A3.2 The New Denali Commission Clinic Floor Plan meeting the ARPCF Space Guidelines and proposed for this location is attached.
- A3.3 The Alternate New Denali Commission Clinic Floor Plan meeting the ARPCF Space Guidelines and proposed for this location is attached.

IV. Deficiency Evaluation

A. Deficiency Codes:

The deficiencies are categorized according to the following deficiency codes to allow the work to be prioritized for funding. The codes are as follows:

- 01 Program Deficiencies:** Based on assessment of the facility's ability to support the stated services that are required to be provided at the site.
- 02 Fire and Life Safety Deficiencies:** Based on the identified areas where the facility is not in compliance with provisions of the state building codes including, UBC, UFC, NFPA 101, UMPC, NEC. These are organized sequentially from Architectural
- 03 General Safety:** Based on items that are not necessarily code items but are conditions that are considered un-safe by common design and building practices.
- 04 Environmental Compliance:** Based on non-conformance with DEC regulations, hazardous materials and general sanitation.
- 05 Program Deficiencies:** These are items that are required for delivery of the medical services model currently accepted for rural Alaska. This may include space requirements, functional needs, or other items to meet the delivery of quality medical services.
- 06 Unmet Supportable Space Needs:** These are items that are required to meet the program delivery of the clinic and may not be show or delineated in the Alaska Primary Care Facility Space Guidelines.
- 07 Disability Access Deficiencies:** Items not in compliance with the Americans with Disabilities Act.
- 08 Energy Conservation:** These are items that are required for energy conservation and good energy management.
- 09 Plant Management:** This category is for items that are required for easy and cost efficient management and maintenance of the Physical Plant.
- 10 Architectural M & R:** Items affecting the architectural integrity of the facility, materials used, insulation, vapor retarder, attic and crawlspace ventilation, and general condition of interiors, and prevention of deterioration of structure and systems.
- 11 Structural M & R:** Deficiencies and items affecting the integrity of the building. These include foundations, roof and wall structure, materials used, insulation, vapor retarder, attic and crawlspace ventilation, and general condition of interiors.
- 12 Mechanical M & R:** Deficiencies in plumbing, heating, ventilation, air conditioning, or medical air systems.

- 13 Electrical M & R:** Deficiencies with electrical generating, distribution, fire alarm, and communications systems.
- 14 Utilities M & R:** Deficiencies with the utilities hook-ups, systems, and distribution.
- 15 Grounds M & R:** Deficiencies with the civil site issues, drainage, access, etc.
- 16 Painting M & R:** Deficiencies of painting, exterior, interior, trim and soffit.
- 17 Roof M & R:** Deficiencies in roofing, and related systems including openings.
- 18 Seismic Mitigation:** Deficiencies in seismic structural items or other related issues to seismic design including material improperly anchored to withstand seismic effect.

B. Photographs:

We have provided photographs attached which are noted to describe the various deficiencies described in the narratives and itemized in the summary below. The photos do not cover all deficiencies and are intended to provide a visual reference to persons viewing the report who are not familiar with the facility.

We have included additional photos as Appendix B for general reference. These are intended to add additional information to the specific deficiencies listed and to provide general background information.

C. Cost Estimate General Provisions

1. New Clinic Construction

- **Base Cost**

The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency). The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

- **Project Cost Factors**

- Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.
- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.
- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Estimated Total Project Cost of New Building**

This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

2. Remodel, Renovations, and Additions

- **Base Cost**

The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

The cost of Additions to clinics is estimated at a unit cost higher than new clinics due to the complexities of tying into the existing structures.

Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

- **General Requirements Factor**

General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Contingency for Design Unknowns (Estimating Contingency)**

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

- **Estimated Total Cost**

This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

- **Project Cost Factors**

Similar to new clinics, the following project factors have been included in Section VI of this report.

- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.
- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Estimated Total Project Cost of Remodel/Addition**

This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

V. Summary of Existing Clinic Deficiencies

The attached sheets document the deficiencies; provide recommendations on how to make repairs or accommodate the needs and provide a cost estimate to accomplish the proposed modifications. The summary addresses individual deficiencies. If all deficiencies were to be addressed in a single construction project there would be cost efficiencies that are not reflected in this tabulation.

These sheets are reports from the Access Data Base of individual Deficiencies that are compiled on individual forms and attached for reference.

Refer to Section VI. New Clinic Analysis for a comparison of remodel/addition to new construction.

VI. New Clinic Analysis

The analysis of whether a new clinic is required is based on the Denali Commission standard of evaluation that "New Construction is viable if the cost of Repair/Renovation and Addition exceeds 75% of the cost of New Construction".

We have therefore determined the cost of a New Clinic Construction to meet the Alaska Rural Primary Care Facility (ARPCF) Space Guidelines for this size of village. We have also determined the cost of Repair/Renovation & Addition to the existing Clinic to meet the same ARPCF Space Guidelines.

A. The cost of a New Denali Commission 2000 SF Medium Clinic in Elim is projected to be:

• Base Anchorage Construction Cost per s.f.		\$183
• Project Cost Factor:	@ 45%	\$ 82
Medical Equipment	17%	
Construction Contingency	10%	
Design Fees	10%	
Construction Administration	8%	
• Multiplier for Village	@ 1.77	\$204
Adjusted Cost per SF		\$469

Projected Cost of a New Clinic: 2000 s.f. X \$469 = \$938,000

B. The cost of the Repair/Renovation and Additions for the existing Clinic are projected to be:

• Code & Condition Repairs/Renovations		
Cost from Deficiency Summary		\$505,073
• Remodel/Upgrade work		
100% of clinic 808 SF = 808 SF @ \$143/SF		\$115,785
• Additional Space Required by ARPCF – 1200 SF		
○ Base Anchorage Cost		\$183
Additional Costs –		\$115
Medical Equipment	17%	
General Requirements	20%	
Estimation Contingency	15%	
○ Multiplier for Village	@ 1.77	\$229
Adjusted Cost per SF		\$527
Total Addition Cost of 1200 SF @ \$527		\$637,943
• Project Cost Factor:	@ 28%	\$352,464
Construction Contingency	10%	
Construction Administration	8%	
Design Fees	10%	

Total cost of remodel/addition \$1,611,265

C. Comparison of Existing Clinic Renovation/Addition versus New Clinic:

Ratio of Renovation/Addition versus New Clinic is:

\$1,611,265 / \$938,000 = 1.72 x cost of New Clinic

Based on Denali Commission standard of evaluation; the remodel/addition costs are more than 75% of the cost of new construction. A new clinic is recommended for this community.

* Note: Village factors may have been adjusted for recent 2001 cost adjustments and may have changed from previously published data distributed to the villages.

VII. Conclusions and Recommendations

The existing Elim Clinic has served the community well for many years. Base on current ANTHC and YKHC delivery model for health care to rural Alaska, the facility is not adequate in size or in condition to meet these needs. The existing structure could be adapted for many other less clinical and medically stringent uses without extensive remodeling.

After careful review it is the recommendation of the consultant team that a new Denali Commission Medium 2000 SF Clinic be considered for Elim. The addition of approximately 1200 SF of clinic space required by the current ARPCF Program Space Guidelines and the major renovation and upgrading of the existing clinic space will cost 1.71 times the cost of a new clinic. This results in the recommendation of a new clinic for this village.

We reviewed the options with the local community leaders the consensus was that the New Medium Clinic would meet the current community needs and for years to come. In addition, they agreed and provided a new clinic site adjacent to the existing Church on the road to the airport and adjacent to city facilities. The new site will be adjacent to all city utilities as currently planned and can use the currently operating water and sewer system.

The community believes this is a good solution and will produce the best return for funds invested in a clinic that meets the needs of Elim community and is aggressively moving to assist in any way to accomplish this goal.

Appendix A: Specific Deficiencies Listings

The attached sheets represent the individual deficiencies identified for this project and the corrective action required to meet current codes and standards of construction. The deficiencies are further summarized in Section V. Summary of Existing Clinic Deficiencies.